

REMARKS

Claims 55-75 are pending in the application. Claims 55-73 were withdrawn by the Examiner, and claims 74 and 75 were examined. No amendments have been made. Based on the following remarks, reconsideration and allowance of this application is respectfully requested.

Claims 74 and 75 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,356,790 to Maguire et al (“Maguire”) in view of U.S. Patent No. 6,564,096 to Mest (“Mest”). Applicant respectfully traverses this rejection because no proper combination of Maguire and Mest discloses, teaches, or suggests the combination of elements required by these claims.

In particular, independent claim 74 is directed to a surgical system that includes a surgical probe having an ablation element, and a stimulation element, “wherein the ablation element comprises a pair of longitudinally spaced ablation elements and the stimulation element is located between the ablation elements, the stimulation element configuration being different than the ablation element configuration.” In contrast, Maguire teaches a catheter that includes ablation electrodes 12 and 16, and an electrode 20 “employed primarily for cardiac mapping.” See Fig. 1 and col. 3, lines 48-59 of Maguire. Maguire further discloses that “[a]dditional mapping electrodes may optionally be added between electrodes 12 and 16.” The mapping electrode taught by Maguire cannot properly be construed as a “stimulation element,” because mapping electrodes do not provide stimulation.

Rather, as is well known in the art, a mapping electrode serves as a sensor or antenna for detecting electrical activity of the heart. *See, e.g.*, col. 1, lines 38-50 of U.S. Patent No. 6,063,080 (previously made of record), which explains that cardiac mapping is used to identify a potential ablation site. This procedure involves inserting a catheter having multiple electrodes into the heart and monitoring the electrical signals of the heart in order to identify tissue causing an arrhythmia. In this manner, cardiac mapping electrodes “serve as individual antennas for detecting the electrical activity of the heart in the area corresponding to that electrode.” The description of a cardiac mapping electrode and the understanding of persons of ordinary skill in the art have not been addressed or reconciled by the Office Action. *See also*, U.S. Patent Nos. 5,964,753 and 6,360,128 (providing other similar descriptions of cardiac mapping procedures and electrodes) (“Cardiac mapping can be used before ablation to locate aberrant conductive

pathways within the heart. The aberrant conductive pathways constitute peculiar and life threatening patterns, called dysrhythmias. Mapping identifies regions along these pathways, called foci, which are then ablated to treat the dysrhythmia.”). Thus, a mapping electrode is configured for detecting activity of the heart, but is not configured to provide stimulation, and as such, cannot properly be construed as a “stimulation element.” While Maguire teaches a mapping electrode, Maguire fails to teach or suggest a stimulation element, much less a stimulation element that is located between ablation elements.

Despite this, the Office Action alleges (at the bottom of p. 2) that Maguire discloses “a stimulation element, in the form of pacing/mapping electrodes.” Applicant submits that this is a mischaracterization of the teachings of Maguire. In particular, Maguire teaches mapping electrodes, but does not teach stimulation or pacing electrodes. For at least the reasons set forth above, the mapping electrodes taught by Maguire cannot properly be construed as stimulation electrodes.

The surgical system recited by independent claim 74 also includes a source of stimulation energy. Since Maguire does not teach or suggest a stimulation element, it follows that Maguire does not teach or suggest a source of stimulation energy. Despite this, the Office Action alleges (in the middle of p. 3) that the invention disclosed by Maguire “must contain a source of stimulation energy as it would otherwise be inoperable.” This allegation is based on the assertion that the mapping electrode taught by Maguire is a stimulation element. However, as discussed above, a mapping electrode is not a stimulation element. Thus, the invention disclosed by Maguire does not require a source of stimulation energy for proper operation.

The Office Action further alleges that “it is extremely well known in the art that electrosurgical catheters that have stimulation (i.e. pacing) electrodes are connectable to electrical stimulation energy sources.” Even if this statement was true, it is irrelevant to the teachings of Maguire. That is, Maguire teaches a mapping electrode, not a stimulation or pacing electrode. Thus, while it may be well known to connect stimulation or pacing electrodes to sources of stimulation energy, it is not well known to connect mapping electrodes to sources of stimulation energy. As discussed above, mapping electrodes are used for sensing, not stimulating, and thus are not connected to sources of stimulation energy.

These deficiencies in Maguire are not cured by the teachings of Mest. Mest teaches electrodes 36 configured for delivering stimulation and a signal generator 1 coupled to the

electrodes 36. However, it would not have been obvious to one of ordinary skill in the art to modify Maguire to include the stimulation electrodes and the signal generator taught by Mest. Further, the Office Action fails to provide any evidence to support a conclusion that it would have been obvious to modify Maguire in this manner.

The Office Action alleges (in the sentence spanning pages 3 and 4) that it would have been obvious to modify Maguire to operatively couple the stimulating ring electrodes to a source of stimulation energy. However, Maguire teaches a mapping electrode, not a stimulating electrode. Applicants submit that it would not have been obvious to couple the mapping electrode to a source of stimulation energy, because a mapping electrode is not used for conveying stimulus. Further, the Office Action fails to provide any evidence to support a conclusion that it would have been obvious to modify Maguire's mapping/ablation catheter to be coupled to a source of stimulation energy.

In view of these deficiencies, it is respectfully submitted that independent claim 74 is patentable over Maguire and Mest. Dependent claim 75 depends from and incorporates the elements of independent claim 74 and, therefore, is also believed patentable over the cited references. Accordingly, Applicant respectfully requests that the rejection of claims 74 and 75 under 35 U.S.C. §103(a) be withdrawn.

CONCLUSION

Applicant respectfully requests allowance of the application in view of the forgoing remarks. If there are any remaining issues that can be resolved by telephone, Applicant invites the Examiner to kindly contact the undersigned at the number indicated below.

Respectfully submitted,

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